

AUG 1 1989

Ms. Caroline K. Ehmer  
Calahrian Corporation  
1445 North Loop West  
Suite 800  
Houston, TX 77008

**BEST AVAILABLE COPY**

Dear Ms. Ehmer:

Subject: Calco Copper Sulfate  
EPA Registration No. 39295-8  
Application to Amend Registration Dated July 10, 1989

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/ reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit <sup>five</sup> ~~one~~ (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

Lawrence J. Schnaubelt  
Acting Product Manager-23  
Fungicide-Herbicide Branch  
Registration Division (47505C)

Enclosure

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**CALCO  
COPPER SULFATE  
50 LBS. NET WEIGHT**

**ONLY FOR SALE TO, USE AND STORAGE BY SERVICE PERSONNEL**

**NOT FOR MEDICINAL USE  
KEEP OUT OF REACH OF CHILDREN**

**ACTIVE INGREDIENT:  
Copper Sulfate Pentahydrate  
INERT INGREDIENTS:**

99.0%  
1.0%

Total  
Copper as metallic, not less than

100.0%  
25.0%

**PRECAUTIONARY STATEMENTS:  
DANGER! HAZARD TO HUMANS AND DOMESTIC ANIMALS.  
CORROSIVE. IRRITANT. FATAL IF SWALLOWED.**

This product can cause severe eye and skin irritation. Harmful if absorbed through the skin or inhaled. Some individuals may experience an allergic reaction. Do not get in eyes, on skin, or on clothing. Do not breathe dust or spray mist. Wear protective (impervious) clothing, goggles or face shield, and rubber gloves when handling. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**STATEMENT OF PRACTICAL TREATMENT:**

In case of eye contact, hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention. Skin contact: Wash with plenty of soap and water. Get medical attention if irritation persists. If swallowed: call a physician or Poison Control Center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger, or, if available by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

**ENVIRONMENTAL HAZARD:**

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public water unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA. Drift and runoff from treatment of terrestrial sites may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwater. Direct application of copper sulfate to water may cause a significant reduction in populations of aquatic invertebrates, plants and fish. Do not treat more than one-half of lake or pond at one time in order to avoid depletion of oxygen from decaying vegetation. Allow 1 to 2 weeks between treatment for oxygen levels to recover. Trout and other species of fish may be killed at application rates recommended on this label, especially in soft or acid waters. However, fish toxicity generally decreases when the hardness of water increases. Consult your State Fish and Game Agency before applying this product to public waters. Permits may be required before treating such waters.

**Manufactured for Calabrian International Corporation  
265 Davidson Ave. Somerset, New Jersey 08873**

EPA Est. No.:39295-BG-01  
EPA registration No.:39295-8

ACCEPTED  
with COMMENTS  
to EPA Letter Dated:

Aug 1, 1989

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.

39295-8

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

## STORAGE AND DISPOSAL

### Prohibitions:

Do not contaminate water, food or feed by storage or disposal. Open burning and dumping is prohibited. Do not re-use empty container.

### Storage:

Keep pesticides in original container. Do not put concentrate in food or drink container.

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### Pesticide Disposal:

Pesticide, spray mixture, or residue that cannot be used in accordance with label instructions must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

### Container Disposal:

Rinse container liner with water and add rinse to use solution or completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Dispose of polywoven bags in accordance with Federal, State or Local authorities for approved procedures according to the Resource Conservation and Recovery Act.

### CALCO COPPER SULFATE ALGAEICIDE GENERAL INSTRUCTIONS:

There are many factors to consider in controlling algae in impounded water, lakes, ponds, reservoirs, and flooded rice fields. These include water temperature and hardness, type of vegetation to be controlled, and the water flow. A small amount of Copper Sulfate can effectively control algae in water provided the algae growth is treated early in the development. If large amounts of algae are present, larger quantities of Copper Sulfate will be required. In moving water systems, control of algae is more difficult than in a body of stagnant water. In this situation, curtail the flow of water before treatment and hold dormant for approximately three days after treatment or until the vegetation has begun to die. Copper Sulfate works effectively in water temperatures above 60°F and in low hardness water. Mix Copper Sulfate in a glass or plastic container. If a metal container is used, make certain it is either painted, copper lined, or enameled since Copper Sulfate causes a chemical reaction with a galvanized container and the copper plates out on the container. To minimize the possibility of fish kill that could be caused by the loss of oxygen in the water from the dead algae treat up to 1/3 or 1/2 of the water area at a time and wait and proceed outwards. Consult State fish and game agencies before applying if treated water is to be used as a source of potable water, the metallic copper residual must not exceed 1 PPM (4 PPM Copper Sulfate Pentahydrate).

### SPECIFIC INSTRUCTIONS:

Calculations for the Amount of Water Impounded and for the Amount of Copper Sulfate to be Used.

#### A. Determine water volume as follows:

1. Measure surface area by measuring of regular shaped ponds or mapping of irregular ponds or by reference to previously recorded engineering plans or maps.
2. Calculate average depth by sounding in a regular pattern and taking the mean of these readings or by reference to previously obtained data.
3. Multiply surface area in feet by average depth and feet to obtain cubic feet of water volume.
4. Multiply surface area in acres by average depth and feet to obtain total acre-feet of water volume.
5. Determine the number of acre feet of water to be treated. An acre foot of water is equal to one acre of water one foot deep which equals 326,000 gallons or 2,720,000 pounds. Multiply volume in cubic feet by 82.44 to obtain total pounds of water or multiply volume in acre feet by 2,720,000 to obtain pounds of water.
6. Determine the Copper Sulfate Pentahydrate needed to achieve the recommended concentration, multiply the weight of water by the recommended concentration of Copper Sulfate. Since recommended concentrations are normally given in parts per million (ppm) it will first be necessary to convert the value in parts per million to decimal equivalent. For example, 2 ppm is the same as 0.000002 when used in this calculation. Therefore, to calculate the amount of Copper Sulfate Pentahydrate to treat 1 acre-foot of water with 2 ppm Copper Sulfate the calculation would be as follows:  
$$0.000002 \times 2,720,000 = 5.44 \text{ lbs. Copper Sulfate Pentahydrate}$$

Please note that the rate of application of Copper Sulfate in still water should not exceed 2 ppm.

#### For Algae Control in Impounded water, lakes, ponds, and reservoirs:

Determine the amount of CALCO Copper Sulfate to be added and dissolve the crystals in water and spray over the area to be treated. Apply the mixture as a uniform surface spray using a boat or a pressure spraying device. Where the situation permits, Copper Sulfate may be applied under the water by boat by dragging burlap bags containing medium to large crystals of Copper Sulfate. Begin treatment along the shoreline and proceed outward and make certain even distribution is achieved by traveling in parallel lines about 20-100 feet apart.

#### For control of Tadpole Shrimp in flooded rice fields:

Apply CALCO Copper Sulfate at a rate of 10-15 pound per acre by mixing with 500 parts of water and applying as a uniform surface spray using boat and pressurized spraying device. Use at first indication after the field has been flooded to a depth of 6-8 inches.

#### Control of water flow in ditches, streams and irrigation systems:

Determine amount of water flow in cubic feet per second by means of a weir or other measuring device. Determine the amount of CALCO Copper Sulfate required for treating ditches or streams and use a continuous application method, selecting proper equipment, to add the Copper Sulfate crystals as follows:

#### For control in irrigation systems:

Use continuous feeder application method by applying 0.1 to 0.2 pounds of CALCO Copper Sulfate per cubic foot per second per hour. Begin continuous addition when water is first turned into the system and continue throughout the irrigation season.

#### For leafy and sago pond weed control in irrigation systems:

Use a continuous feeder application system by applying 0.25-0.50 pounds of CALCO Copper Sulfate per cubic foot per second per hour. It is best to apply the Copper Sulfate crystals when the water is first turned into the system or ditch to be treated and to continue throughout the irrigation season.

#### To Control Algae in Irrigation Conveyance Systems Using the Slug Application Method:

Apply copper sulfate at a rate of 0.25 lb. per CFS flow. Place chemical in burlap bag in an area of turbulent flow and repeat every 10 to 14 days in warm weather. An application is usually required every 5 to 30 miles depending upon alkalinity and algae concentration in the water.

### SEWER TREATMENT-ROOT DESTROYER:

CALCO Copper Sulfate is an effective root destroyer. For a partial stoppage, add a minimum of two pints or drain and flush toward the blockage with five gallons of water. Repeat every six months to prevent growth of sewer or drain, remove the blockage physically and repeat the preceding procedure.

Apply CALCO Copper Sulfate to the sewer to destroy roots. For a complete stoppage

### WOOD TREATMENT (Green, peeled posts and fungus decay, rot):

Prepare a solution of 18.0 pounds of Sodium Chromate in each 28 gallons of water to be used and a separate second solution of 18.0 pounds of Copper Sulfate in each 24 gallons of water to be used; soak the peeled green posts, butt end down first in the Copper Sulfate solution for three days, then butt end down in the Sodium Chromate solution for two days, and finally, turn the posts upside down in the Sodium Chromate solution for one additional day. Remove and rinse post with clear water.

### BORDEAUX MIXTURE GENERAL INSTRUCTIONS:

A Bordeaux formulation consists of three numbers such as 10-10-100. The first figure (10) represents the number of pounds of Copper Sulfate Pentahydrate; the second figure (10) represents the pounds of hydrated lime, and, the third figure (100) represents the number of gallons of water to use. Use as a full coverage spray to runoff. Prepare a Bordeaux mixture first with a tank of water, 1/2 full. With an agitator running, mix CALCO Copper Sulfate through a copper, bronze, plastic, or stainless steel screen. Add water so the tank is 3/4 full and mix in the hydrated lime through the screen. Finish filling the tank with the balance of water.

Prepare a 10-10-100 Bordeaux and apply as a dormant spray in late fall or early spring.

**Brown Rot Blossom blight on Almonds, Apples, Cherries, Peaches, Nectarines, Plums, Prunes:**  
Prepare a 10-10-100 Bordeaux and apply when the buds begin to swell.

**Leaf Spots on Sour Cherries:**

Prepare a 10-10-100 Bordeaux and apply as a full coverage spray after petal fall or as recommended by the State extension service.

**Phytophthora Brown Rot on Lemons, Oranges, Grapefruit:**

Prepare a 3-4 1/2-100 Bordeaux where there is no history of Copper injury or a 3-2-6-100 (Zinc Sulfate-Copper Sulfate-Hydrated Lime-gallons of water) Bordeaux. Spray 8 gallons on skirt of tree 3-4 feet high and 2-4 gallons on trunk and ground under tree. If P. hitamalis is present, use 10-15 gallons to completely cover each tree. Apply in November or December just before or after first rain. In severe brown rot season, apply second application in January or February.

**Septoria Fruit and Leaf Spot, Central California and Brown Rot and Zinc and Copper Deficiencies on Lemons, Oranges, and Grapefruit:**  
Prepare a 3-2-6-100 Bordeaux and use 10-25 gallons to completely cover each tree. Apply in October, November, or December before or just after the first rain.

**Walnut Blight on Walnuts:**

Prepare a 10-10-100 Bordeaux plus one half gallon summer oil emulsion. Apply in early prebloom 10-20% pistillate (not when catkin blooms are showing) before or after rain. Use only if Bordeaux mixture has been shown to be non-phytotoxic in your area.

**NOTICE TO BUYERS:**

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

**CALABRIAN INTERNATIONAL CORPORATION**  
255 DAVIDSON AVE., SOMERSET, NEW JERSEY 08879